

Name \_\_\_\_\_ Date \_\_\_\_\_



## CHROMATOGRAPHY QUIZ

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1. What is chromatography?

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2. The two phases of paper chromatography are the stationary phase and the mobile phase.

What is a stationary phase?	What is a mobile phase?
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3. The two types of paper chromatography are ascending and descending paper chromatography.

What is ascending paper chromatography?	What is descending paper chromatography?
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4. Indicate whether the following statements about paper chromatography are True or False

<b>Statement</b>	<b>True (T) or False (F)</b>
Chromatography is only used for the separation of coloured substances.	
In paper chromatography, the differences in interactions with the stationary and mobile phases cause the separation of the different components of the mixture.	
If a substance gives one spot when run in different solvents, it indicates the presence of impurities.	
Paper chromatography can detect the presence of impurities in substances.	

5. Use the word bank below to fill in the blank spaces.

**Chromatogram, Analyte, Adsorption, Solvent, Solvent Front, Baseline, Solubility**

- a. \_\_\_\_\_ is the process by which the sample components adhere to the surface of the stationary phase.
  - b. \_\_\_\_\_ The ability of a substance to dissolve in a solvent.
  - c. The \_\_\_\_\_ is the liquid used as the mobile phase in chromatography.
  - d. The substance or mixture of substances being analyzed in chromatography is called\_\_\_\_\_.
  - e. The\_\_\_\_\_ is the starting line on the chromatogram where the sample is applied.
  - f. The leading edge of the mobile phase as it moves through the stationary phase is called\_\_\_\_\_
  - g. \_\_\_\_\_ is the output of a chromatography run or the visual representation of the separation process that has occurred during chromatography.
6. If paper chromatography is used to analyze colorless substances, what two methods can be used in the identification of the substances?

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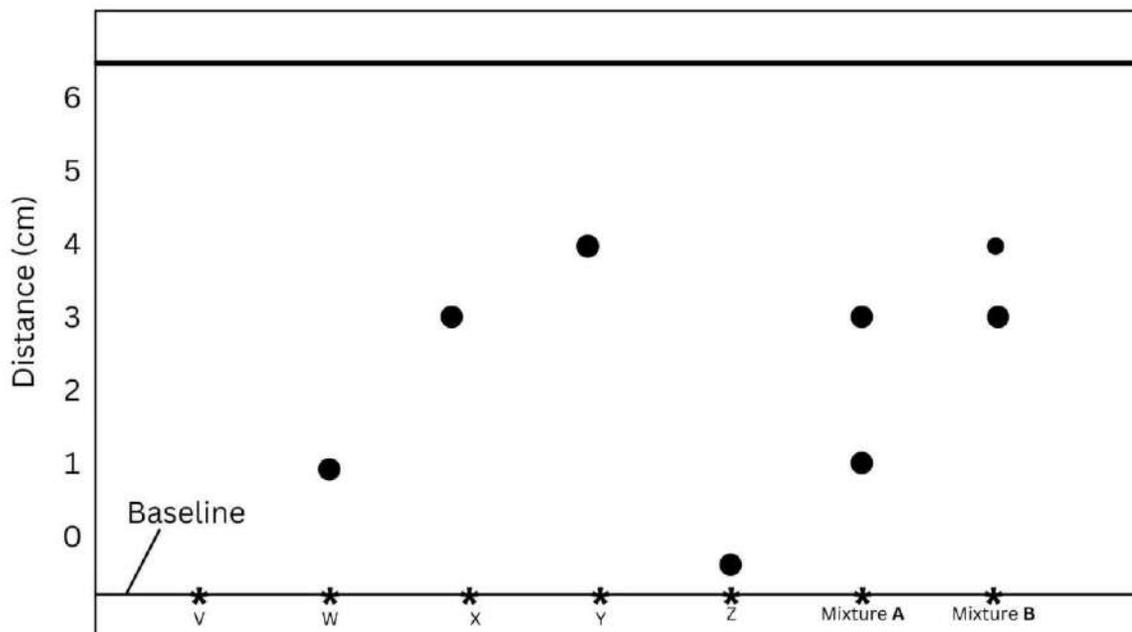
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7. The following chromatogram was obtained in an experiment to analyze two mixtures, A and B. Use it to answer the questions below:



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- a. How many components were in each mixture?

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- b. Which pure substance was:

I. Least soluble: \_\_\_\_\_

II. Most soluble: \_\_\_\_\_

- c. Which pure substances were in the mixture:

I. A: \_\_\_\_\_

II. B: \_\_\_\_\_

d. Which component was present in both mixtures? \_\_\_\_\_

e. Which pure substance is not found in either mixture? \_\_\_\_\_

f. Why is the baseline usually drawn in pencil and not in ink?

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g. What is the name given to the uppermost bold line\_\_\_\_\_.

h. Other than chromatography paper, what else is required during the separation of the two mixtures?

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i. State two factors that determine how far a substance moves up the adsorbent material.

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8. State at least 3 applications of paper chromatography in real life.

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